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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,065	05/11/2006	Kazumi Naito	Q78509	3365
23373 7590 01/14/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER THOMAS, ERIC W	
			ART UNIT 2831	PAPER NUMBER
			MAIL DATE 01/14/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/579,065

Applicant(s)

NAITO, KAZUMI

Examiner

Eric Thomas

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 7-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **INTRODUCTION**

The examiner acknowledges, as recommended in the MPEP, the applicant's submission of the amendment dated 11/9/07. At this point, claim 1 has been amended and claims 3, 5-6 have been cancelled. Thus claims 1-2, 4, 7-15 are pending in the instant application.

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: Claim 4 is confusing. Claim 1 excludes aluminum, titanium, or niobium oxide. Appropriate correction is required.

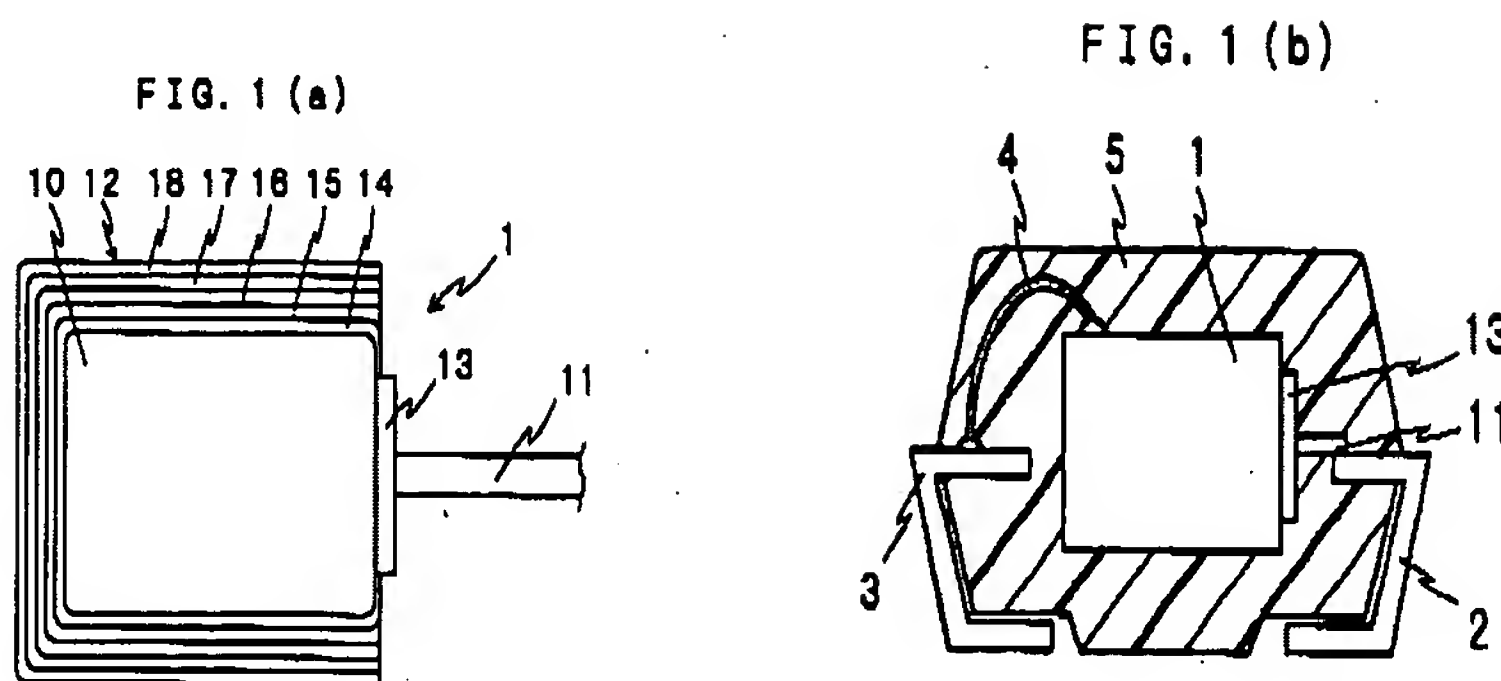
## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 4, 7, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 6,333,844) in view of Shiga et al. (WO 02/11932).



Nakamura discloses in fig. 1a, 1b, a solid electrolyte capacitor comprising a jacketed capacitor element, the capacitor element being obtained by sequentially stacking a dielectric oxide film layer (14), a semiconductor layer (15) and an electrically conducting layer (16-18) on a surface of a valve-acting metal sintered body or electrically conducting oxide sintered body connected with an anode lead, wherein the thickness of the semiconductor layer in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead is 5  $\mu\text{m}$  or less (0 – see fig. 1) and the thickness of the semiconductor layer in the portion excluding the vicinity of the anode lead-connection point is from 20-30  $\mu\text{m}$  (see col. 4 lines 45-54).

Nakamura discloses the claimed invention except for the metal sintered body is a tantalum sintered body having a CV of 100,000  $\mu\text{F V/g}$  or more or a niobium sintered body having a CV of 150,000  $\mu\text{F V/g}$  or more.

Shiga et al. teach the use of a tantalum powder sintered body having a CV of 150,000  $\mu\text{F V/g}$  (see abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the valve acting metal of Shiga et al. in the

capacitor of Nakamura, since such a modification would form an anode having a high CV value.

Regarding claim 2, Nakamura discloses the semiconductor layer is not provided in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead (see fig. 2a).

Regarding claim 4, Shiga et al. teach that the valve metal is tantalum.

Regarding claim 7, Nakamura discloses the semiconductor layer is an inorganic semiconductor layer (manganese dioxide -- see col. 4 lines 45-54).

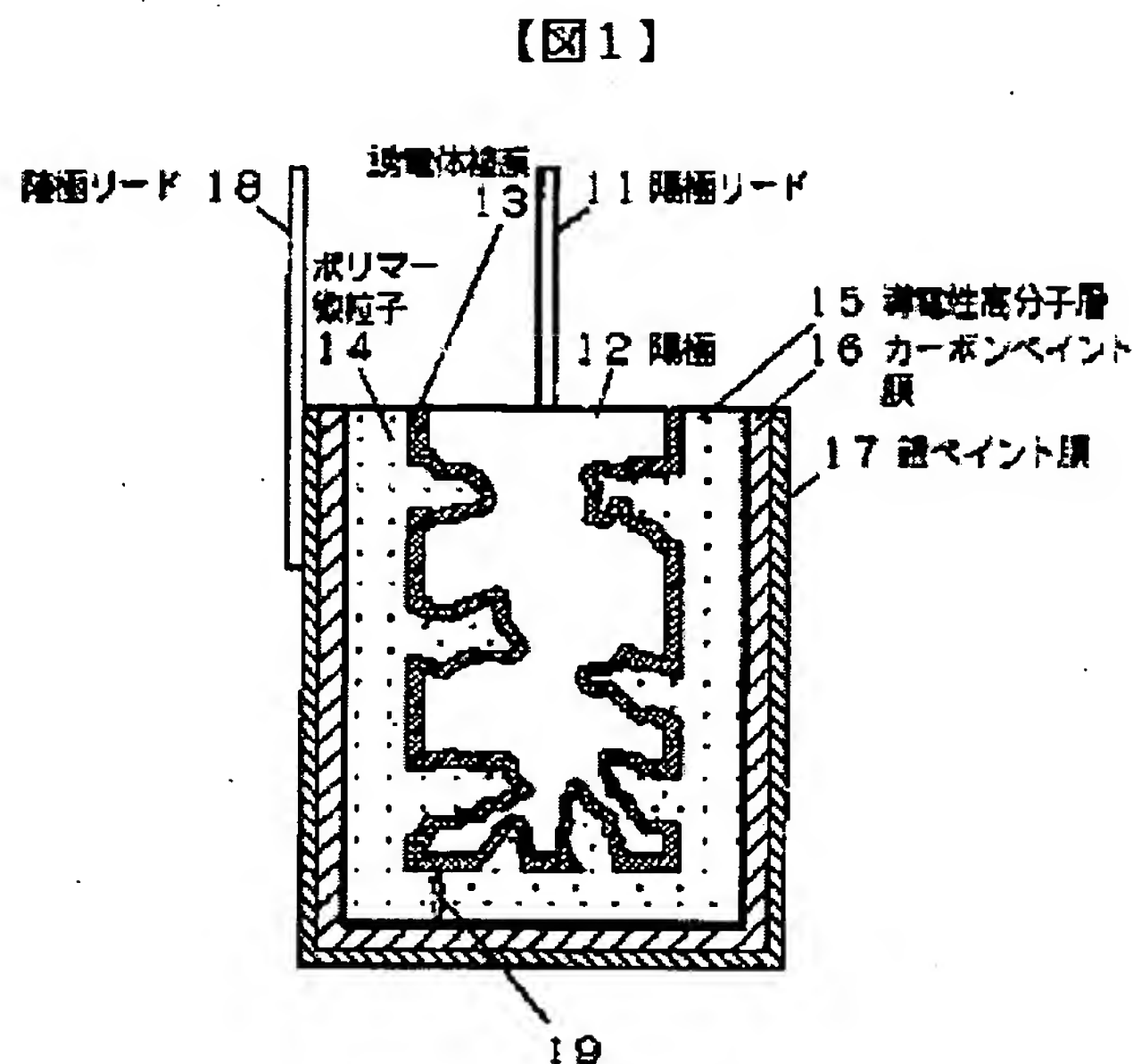
Regarding claim 12, Nakamura discloses the semiconductor is a manganese dioxide.

Regarding claim 13, Nakamura discloses the electrical conductivity of the semiconductor is from  $10^{-3}$  to  $10^3$  S/cm (manganese dioxide).

Regarding claim 14, Nakamura suggests that the capacitor is used in an electronic circuit.

Regarding claim 15, Nakamura suggests that the capacitor is used in an electronic device.

2. Claims 1, 2, 4, 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-067602 ('602) in view of Shiga et al. (WO 02/11932).



'602 discloses in fig. 1, a solid electrolyte capacitor comprising a jacketed capacitor element, the capacitor element being obtained by sequentially stacking a dielectric oxide film layer (13), a semiconductor layer (14) and an electrically conducting layer (16-17) on a surface of a valve-acting metal sintered body or electrically conducting oxide sintered body connected with an anode lead, wherein the thickness of the semiconductor layer in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead is 5  $\mu\text{m}$  or less (0  $\mu\text{m}$  – see fig. 1) and the thickness of the semiconductor layer in the portion excluding the vicinity of the anode lead-connection point is from 10-20  $\mu\text{m}$ .

'602 discloses the claimed invention except for the metal sintered body is a tantalum sintered body having a CV of 100,000  $\mu\text{F V/g}$  or more or a niobium sintered body having a CV of 150,000  $\mu\text{F V/g}$  or more.

Shiga et al. teach the use of a tantalum powder sintered body having a CV of 150,000  $\mu\text{F V/g}$  (see abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the valve acting metal of Shiga et al. in the capacitor of '602, since such a modification would form an anode having a high CV value.

Regarding claim 2, '602 discloses the semiconductor layer is not provided in the vicinity of the anode lead-connection point on the sintered body surface connected with an anode lead.

Regarding claim 4, '602 discloses the valve-acting metal is tantalum.

Regarding claim 7, '602 discloses the semiconductor layer is an organic semiconductor layer.

Regarding claims 8-11, '602 discloses the electrically conducting polymer is polypyrrole.

Regarding claim 13, '602 discloses the electrical conductivity of the semiconductor is from  $10^{-3}$  to  $10^3$  S/cm (see material).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-2, 4, 7-15 have been considered but are moot in view of the new ground(s) of rejection.



***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 5:30 AM - 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ewt

A handwritten signature in black ink, appearing to read 'Eric Thomas', with a stylized, flowing script.

Eric Thomas  
Primary Examiner – 2831